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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/383,802	08/26/1999	DONG HO CHO	678-346(P887	7058

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EXAMINER

CORSARO, NICK

ART UNIT PAPER NUMBER

2684

DATE MAILED: 03/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/383,802

Applicant(s)

CHO ET AL.

Examiner

Nick Corsaro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-20 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☒ Interview Summary (PTO-413) Paper No(s). 9.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

RESPONSE TO AMENDMENT

Response to Arguments

1. Applicant's arguments with respect to claims 9, 12, and 18 have been considered and have merit. Therefore, a new more detailed non-final rejection is set forth below. The examiner upon response to this communication will address any remarks regarding the claims.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 9, 12, 14, 15, and 18, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hulyalkar et al. (6,198,728) in view of Rumer et al. (5,883,893).

Consider claims 1 and 14, Hulyalkar discloses a packet-based voice communication device in a mobile communication system having, a layered-protocol architecture (see col. 4 lines 33-47 and col. 11 lines 26-36). Hulyalkar discloses a layer for mapping voice packets, and thus a W-PVCP layer for mapping voice packets of variable length (see col. 2 lines 13-18, col. 4 lines 40-46, col. 5 lines 8-22, and col. 5 lines 49-51). Hulyalkar discloses a MAC (Medium Access Control) layer and a physical layer for transmitting the mapped packet frame to a station on a channel (see col. 5 lines 1-26). Hulyalkar does not specifically disclose a W-PVCP (Wireless Packet Voice Convergence Protocol) layer for mapping a voice packet of variable length generated due to activation voice traffic onto a packet frame of a fixed length. Rumer

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teaches a W-PVCP (Wireless Packet Voice Convergence Protocol) layer for mapping a voice packet of variable length generated only upon activation voice traffic onto a packet frame of a fixed length (see col. 1 lines 24-30, col. 3 lines 19-24, col. 3 lines 35-40, and col. 3 lines 53-58). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Hulyalkar, and have a W-PVCP (Wireless Packet Voice Convergence Protocol) layer for mapping a voice packet of variable length generated due to activation voice traffic onto a packet frame of a fixed length, as taught by Rumer, thus allowing various wired line voice packet protocols to be mapped to the fixed length cellular protocol.

Consider claims 9 and 18, Hulyalkar discloses a packet based voice communication device in a mobile communication system having protocol architecture (see abstract lines 1-3, and col. 4 lines 33-38). Hulyalkar discloses a physical layer and a MAC (medium Access Control) layer for transmitting a voice packet received on a channel to an upper protocol layer that maps packets, therefore, a W-PVCP (Wireless Packet Voice Convergence Protocol) layer (see col. 4 lines 64-67, col. 5 lines 1-27). Hulyalkar discloses wherein said upper W-PVCP layer calculates a synchronization delay by utilizing a time factor that indicates delay included in a first voice packet received from said MAC layer, and buffers the subsequent voice packets for a predetermined time period based on the synchronization delay, and transmits the buffered voice packets to a packet application (see col. 11 lines 18-44, col. 11 lines 60-63, and col. 5 lines 1-67). Hulyalkar discloses a time factor in the first packet that would inherently if not obviously include a time stamp (see col. 11 lines 60-67 and col. 11 lines 18-45). Hulyalkar does not specifically disclose a time stamp. Rumer teaches a time stamp (see col. 8 lines 30-46). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the

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invention of Hulyalkar, and include a time stamp, as taught by Rumer, thus allowing relative transition time to be indicated for delay sensitive packets.

Consider claim 12, Hulyalkar discloses a packet based voice communication method in a mobile communication system (see col. 4 lines 33-47, col. 11 lines 26-36, col. 4 lines 33-47 and col. 11 lines 26-36). Hulyalkar discloses assigning a packet voice channel upon generation of voice data, entering an active state, and transmitting packetized voice data on said packet voice channel (see col. 6 lines 60-67, col. 7 lines 2-10, col. 7 lines 30-48, col. 13 lines 45-67, col. 14 lines 1-5, col. 7 lines 48-67 and col. 7 lines 47-68). Hulyalkar discloses allocating the slots to other terminals if a terminal has no voice packets to send therefore, releasing the assigned packet voice channel when there is no voice data to be transmitted for a predetermined time period (see col. 7 lines 47-65). Hulyalkar discloses entering an inactive state (see abstract lines 7-10, col. 4 lines 5-8, col. 5 lines 27-60, col. 6 lines 60-67, col. 7 lines 1-10, col. 7 lines 24-47). Hulyalkar does not specifically disclose re-entering the packet voice channel active state from the inactive state when a packet voice channel assigned to the transmit newly generated voice data. Rumer teaches re-entering the packet voice channel active state from the inactive state when a packet voice channel assigned to the transmit newly generated voice data (see col. 3 lines 28-32, col. 4 line 54-67, col. 6 lines 4-30). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Hulyalkar, and re-enter the packet voice channel active state from the inactive state when a packet voice channel assigned to the transmit newly generated voice data, as taught by Rumer, thus allowing excess bandwidth to be used for other terminals.

Consider claims 2 and 15, Hulyalkar discloses an upper point-to-point protocol layer (see col. 4 lines 64-67 and col. 5 lines 1-26). Hulyalkar does not specifically disclose mapping a voice packet of variable length. Rumer teaches mapping a voice packet of variable length (see col. 1 lines 24-30, col. 3 lines 19-24, col. 3 lines 35-40, and col. 3 lines 53-58). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Hulyalkar, and map a voice packet of variable length, as taught by Rumer, thus allowing various wired line voice packet protocols to be mapped to the fixed length cellular protocol.

3. Claims 3-4, 6-8, 10-11, 13, 16-17, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hulyalkar in view of Rumer as applied to claims 1 above, and further in view of Kubler et al. (6,389,010).

Consider claims 3, 4, 16, and 17, Hulyalkar, discloses the system, method, and apparatus, as modified by Rumer above. Rumer further discloses a wait state (see col. 13 lines 15-26, col. 13 lines 1-67 and col. 14 lines 1-67). Hulyalkar and Rumer do not specifically disclose a low power state. Kubler teaches a low power mode (see col. 34 lines 23-40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Hulyalkar and Rumer, and have a low power mode, as taught by Kubler, thus allowing a rest state when no packets are to be transmitted.

Consider claims 6-8, 10, 11, 13, 19, and 20, Hulyalkar and Rumer; do not specifically disclose a CRC area. Kubler teaches a CRC area (see col. 13 lines 20-42). It would have been obvious to one of ordinary skill in the art at the time the invention was made to

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modify the invention of Hulyalkar and Rumer, and have a CRC, as taught by Kubler, thus allowing error detection.

Allowable Subject Matter

4. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

2. Any inquiry concerning this communication should be directed to Nick Corsaro at telephone number (703) 306-5616.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Hunter, can be reached at (703) 308-6732. Any response to this action should be mailed to:

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Or faxed to:

(703) 872-9314 (for Technology center 2600 only)

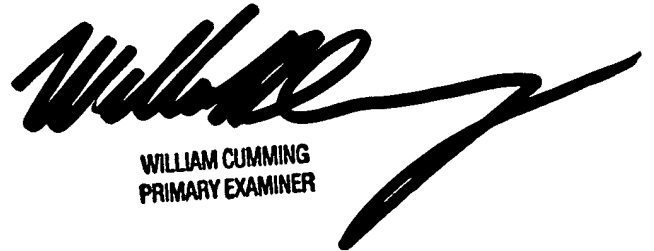
Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth, Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 customer Service Office whose telephone number is (703) 306-0377.

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Nick Corsaro

A handwritten signature in black ink, appearing to read 'Nick Corsaro', with a stylized, flowing script.A large, bold, handwritten signature in black ink, appearing to read 'William Cumming', with a long, sweeping horizontal stroke extending to the right.

WILLIAM CUMMING
PRIMARY EXAMINER